

ABSTRACT

In the present invention, a similar vector is searched from a several hundreds dimensional vector database at a high speed, by a single vector index, and in accordance with either measure of an inner product or a distance by designating a similarity search range and maximum obtained pieces number, vector index preparation is performed by decomposing each vector into a plurality of partial vectors and characterizing the vector by a norm division, belonging region and declination division to prepare an index, and similarity search is performed by obtaining a partial query vector and partial search range from a query vector and search range, performing similarity search in each partial space to accumulate a difference from the search range and to obtain an upper limit value, and obtaining a correct measure from a higher upper limit value to obtain a final similarity search result.